

BE

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

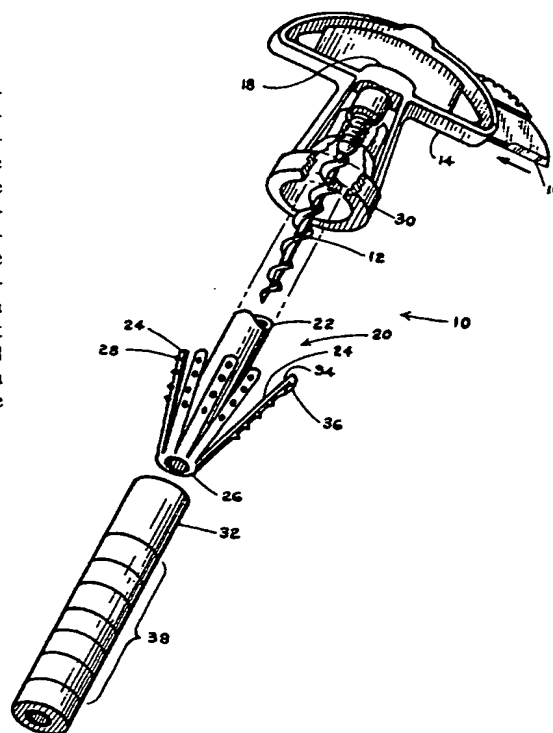
(51) International Patent Classification 4: B67B 7/44	A1	(11) International Publication Number: WO 88/ 03512 (43) International Publication Date: 19 May 1988 (19.05.88)
<p>(21) International Application Number: PCT/US86/02382</p> <p>(22) International Filing Date: 5 November 1986 (05.11.86)</p> <p>(71)(72) Applicant and Inventor: TURATI, Edoardo [US/US]; Wine Waiter Products Inc., 1482 Petaluma Blvd. N., P.O. Box 659, Petaluma, CA 94953 (US).</p> <p>(74) Agent: JOHNSON, Larry, D.; Law Offices, 185 N. Redwood Dr., Suite 130, San Rafael, CA 94903 (US).</p> <p>(81) Designated States: AT (European patent), AU, BE (European patent), CH (European patent), DE (European patent), FR (European patent), GB (European patent), IT (European patent), JP, LU (European patent), NL (European patent), SE (European patent).</p>		<p>Published <i>With international search report.</i></p>

BEST AVAILABLE COPY

(54) Title: WINE BOTTLE OPENER AND ACCESSORY

(57) Abstract

A wine opener and accessory device that combines a number of wine serving tools into the housing of a cork remover (corkscrew or cork puller). First, a contact-type thermometer (38) is incorporated onto the device for measuring the temperature of the wine bottle. Next, a small retractable knife (16) is included in the handle of the device, for cutting foil from a wine bottle. Furthermore, a cork retriever (20) is provided in the same housing to remove corks that are inadvertently pushed into the wine bottle. The cork retriever comprises a hollow, tubular stem (22), with a plurality of thin flexible fingers (24) of plastic at one end. In addition, a small, narrow spoon (34) is formed into the remote end of at least one of the retriever's fingers, providing a tool to remove small pieces of cork or other debris from an opened bottle. Finally, a standard bottle opener (18) is incorporated into the handle of the device to open capped bottles.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT Austria
 AU Australia
 BB Barbados
 BE Belgium
 BG Bulgaria
 BJ Benin
 BR Brazil
 CF Central African Republic
 CG Congo
 CH Switzerland
 CM Cameroon
 DE Germany, Federal Republic of
 DK Denmark
 FI Finland

FR France
 GA Gabon
 GB United Kingdom
 HU Hungary
 IT Italy
 JP Japan
 KP Democratic People's Republic
 of Korea
 KR Republic of Korea
 LI Liechtenstein
 LK Sri Lanka
 LU Luxembourg
 MC Monaco
 MG Madagascar

ML Mali
 MR Mauritania
 MW Malawi
 NL Netherlands
 NO Norway
 RO Romania
 SD Sudan
 SE Sweden
 SN Senegal
 SU Soviet Union
 TD Chad
 TG Togo
 US United States of America

Wine bottle opener and accessory

DESCRIPTIONTECHNICAL FIELD

This invention relates generally to food and beverage utensils, and more specifically to an improved tool for opening and serving bottled liquids, such as wine.

BACKGROUND ART

Tools for removing corks from bottles, such as wine bottles, are well known. Corkscrews and cork pullers are regularly used by restaurateurs, wine stewards, and the general public alike.

However, there are a number of circumstances that may occur during the proper serving of wine that would require the use of additional tools. For example, many wines should be served at a temperature other than room temperature, and it can be difficult to guess the temperature of a wine from just touching the bottle. Of course, while thermometers are well known, and many are of a size that could be simply inserted into an open bottle to measure the temperature of the wine, this practice is awkward and potentially dangerous, in that the thermometer could break and/or otherwise contaminate the wine.

In addition, it is often necessary to cut the foil from the top of the bottle before attempting to

-2-

remove the cork. While most knives would easily accomplish this task, they are often not convenient to the server when opening the bottle.

Furthermore, and despite the server's best efforts, sometimes the cork, rather than being removed, is inadvertently pushed through the bottle neck and into the bottle. Since the cork floats, it tends to remain at or near the bottle neck to prevent free flow of wine through the bottle opening. Moreover, restaurant patrons object to the presence of a cork in a bottle of wine purchased by them. Accordingly, an expensive bottle of wine may be refused by a patron if the cork is not retrieved. Cork retrievers previously proposed are provided with long fingers of wire or metal bands that do not spread apart until they are inserted well within the bottle and cannot readily grasp a cork floating near the bottle neck. In fact, some devices require that the bottle be inverted after the wire fingers are inserted so that the cork can be retrieved. In other devices, the cork has to be "speared" by a central wire and carried thereby down into the bottle before it is grasped by the surrounding prongs. If one is successful in grasping a cork with the spring wire or metal strip prongs of the prior art, the prongs tend to compress the relatively soft cork, causing the cork to expand or bulge outward between the prongs to grip the bottle more firmly. Even if there is relatively little bulging, there remains a substantial surface area of cork providing relatively high friction engagement with

the bottle neck, making the cork difficult to remove.

Another circumstance that sometimes occurs is that a small piece of cork or other debris remains in the bottle just after it has been opened, and it is appropriate to remove that debris before serving the wine. Most ordinary spoons are unable to fit within the narrow bottle neck, so a specialized instrument must be employed, or none at all.

Finally, it is often desirable to serve wine along with a bottled mineral water or other beverage, which requires the opening of that further bottle. In such a case, it is necessary to have a standard "bottle-cap" type opener available. While such tools are common, they are frequently not convenient to the wine server.

DISCLOSURE OF INVENTION

The invention provides a wine opener and accessory device that combines a number of wine serving tools into the housing of an otherwise standard cork remover (corkscrew or cork puller). First, a contact-type thermometer is incorporated onto the device so that the thermometer can be placed directly against a wine bottle to determine the wine's temperature. In this way, a quick temperature measurement can be made, without risk of contaminating the wine. Next, a small retractable knife is included in the handle of the device, to enable convenient cutting of the foil from a wine bottle. Furthermore, a novel cork retriever is provided in the

-4-

same housing to remove corks that are inadvertently pushed into the wine bottle. The cork retriever comprises a hollow, tubular stem, with a plurality of thin flexible strips or fingers of plastic at one end. The fingers normally tend to radiate outward from the stem, but they may be gathered together for insertion into a bottle. Once inserted, they immediately flex outward into engagement with the inner surfaces of the bottle so as to surround a cork floating at the top of the liquid. Then, when the device is pulled upward, small teeth on the inside of the fingers grip into the surface of the cork, and the fingers completely enshroud the cork. The cork, being thus encased within the fingers of low friction material, is easily pulled back up through the neck of the bottle and removed. Narrow slits between the fingers provide leak paths for any wine trapped in the bottle neck above the cork. In addition, a small, narrow spoon is formed into the remote end of at least one of the cork retriever's fingers, which provides an appropriate tool to remove small pieces of cork or other debris remaining in an opened bottle. Finally, a standard bottle opener is incorporated into the handle of the device to conveniently assist in opening capped bottles.

BRIEF DESCRIPTION OF DRAWINGS

In the drawings:

Figure 1 is a partially cutaway side elevation view of a wine opener and accessory device of this

invention;

Figure 2 is a side view of the cork retriever portion of this device as inserted in a bottle to capture a cork; and

Figure 3 is a side view showing the cork being removed from the bottle.

BEST MODE FOR CARRYING OUT THE INVENTION

Figure 1 shows a partially cutaway side elevation view of the wine opener and accessory device 10 of this invention. The wine opener and accessory device comprises a standard corkscrew 12 having a handle 14 that can be used for conventional removal of a cork. Incorporated into the handle 14 is a retractable knife 16, suitable for selective extension to enable the cutting of the foil from a wine bottle. Formed into handle 14 is a bottle opener 18, designed to pry the caps off of standard capped bottles.

Threaded and attached to the handle 14 is a cork retriever assembly 20 comprising a tubular, cylindrical stem 22 with a plurality of flat, flexible plastic fingers 24 extending from one end 26 thereof. One surface of the fingers 24 are provided with a series of pointed teeth 28 for firmly gripping a cork which has been pushed into a bottle, as will hereinafter be described.

The stem 22 and fingers 24 are integrally molded from a suitable plastic or nylon material and, when molded, the fingers are disposed in a generally radial

position. For insertion into a bottle the fingers may be gathered and constricted downward by sliding a collar 30 down the stem 22 and, when so gathered, the thin flat fingers form an almost continuous cylinder with narrow slots between them. To facilitate the plastic memory of the fingers and cause them to seek a generally radial position, the cork retriever assembly 20, when not in use, is contained within a cylindrical carrying tube 32 with the fingers 24 folded back on the stem 22.

At least one of the fingers 24 is further modified on its remote end to form a slightly concave spoon portion 34, which may include a drainage hole 36. This spoon portion is thus extendable down into a bottle to retrieve small pieces of cork or other debris that may be there.

The outer wall of carrying tube 32 incorporates a contact-type thermometer 38, suitable for direct placement against the side of a wine bottle. Thermometer 38 can be simply a strip of temperature sensitive tape, calibrated to display appropriate temperatures between, e.g., 8 to 20 degrees C. Alternatively, the thermometer could consist of a standard bulb-type thermometer.

Referring now to Figures 2 and 3 with greater particularity, the cork retriever assembly 20 is shown in operation. When the fingers 24 are inserted into a bottle, the collar 30 will engage the lip BL around the bottle opening, whereby the collar is pushed up the stem as the fingers are inserted into the bottle neck. When

freed from the collar 30, the fingers spring outward into engagement with the inner surfaces of the bottle, sliding down the surfaces thereof and around the cork C which is floating in the liquid W. As the fingers 24 move downward, the cork C tends to be nested further up toward the stem 22, amid surrounding fingers 24. Because the stem 22 is tubular, the amount of wine displaced as the stem is immersed, is minimized.

When the stem is raised, as shown in Figure 3, the fingers 24 are again constricted by the bottle neck BN and, when so restricted, almost completely enshroud the cork, so that the cork is held out of engagement with the bottle. Hence, only the smooth, relatively slippery surfaces of the fingers 24 engage the inner surface of the bottle neck BN. The cork, being gripped by the teeth 28, is pulled up through the bottle neck, being held out of engagement with the glass by the fingers encasing it. In the meantime, small slots 25 between the fingers provide a leak path for any wine that may be above the cork C as it moves up through the bottle neck, again minimizing spillage.

While this invention has been described in connection with a preferred embodiments thereof, it is obvious that modifications and changes therein may be made by those skilled in the art to which it pertains without departing from the spirit and scope of this invention. Accordingly, the scope of this invention is to be limited only by the appended claims.

WINE OPENER AND ACCESSORY

CLAIMS

What is claimed as invention is:

1. A wine opener and accessory device comprising a cork remover having a handle and a releasably secured housing, said housing including a cork retriever comprising an elongated annular stem of a diameter to fit easily into a bottle opening, a plurality of thin, flat and short fingers on and around one end of said stem and normally extending laterally outward therefrom, said fingers being of a flexible, plastic material and being capable of being constricted and gathered to be inserted into a bottle opening but having plastic memory to flex outwardly toward engagement with the inner surface of said bottle when released, and to slide along said inner surface when said stem is pulled upward, said fingers when constricted within the neck of a bottle forming an almost continuous cylindrical surface to encase a cork therein with the low friction material thereof, and a plurality of small, sharp protuberances on the inner sides of said fingers to grip a cork, the outer sides of said fingers being smooth.

2. The wine opener and accessory device of claim 1 wherein said handle includes a knife member for cutting foil from a bottle, and said cork retriever includes a collar slidable on said stem operative when

positioned at said one end to constrict said fingers.

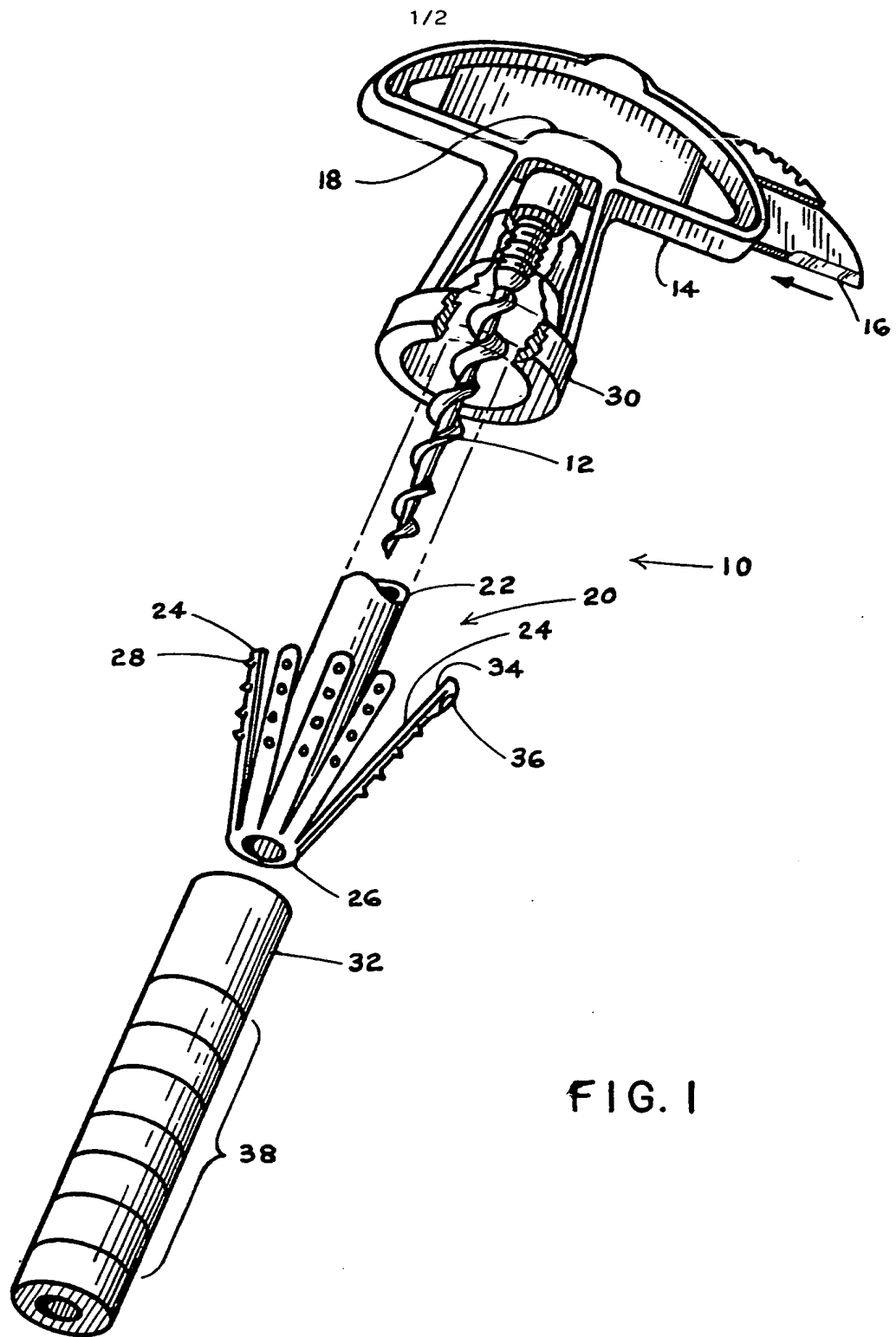
3. The wine opener and accessory device of claim 1 wherein said handle includes a bottle opener for removing caps from bottles, and said cork retriever includes a cylindrical sheath operative to receive and retain said stem with said fingers folded back around said stem.

4. The wine opener and accessory device of claim 1 wherein said housing includes a spoon member for removing debris from a bottle, and said cork retriever includes slits between said fingers to provide leak paths for liquid entrapped above said cork.

5. The wine opener and accessory device of claim 4 wherein said spoon member is carried on at least one of said fingers.

6. The wine opener and accessory device of claim 1 wherein said housing includes a thermometer for measuring the temperature of a bottle.

7. The wine opener and accessory device of claim 3 wherein said cylindrical sheath includes a thermometer for measuring the temperature of a bottle.



2/2

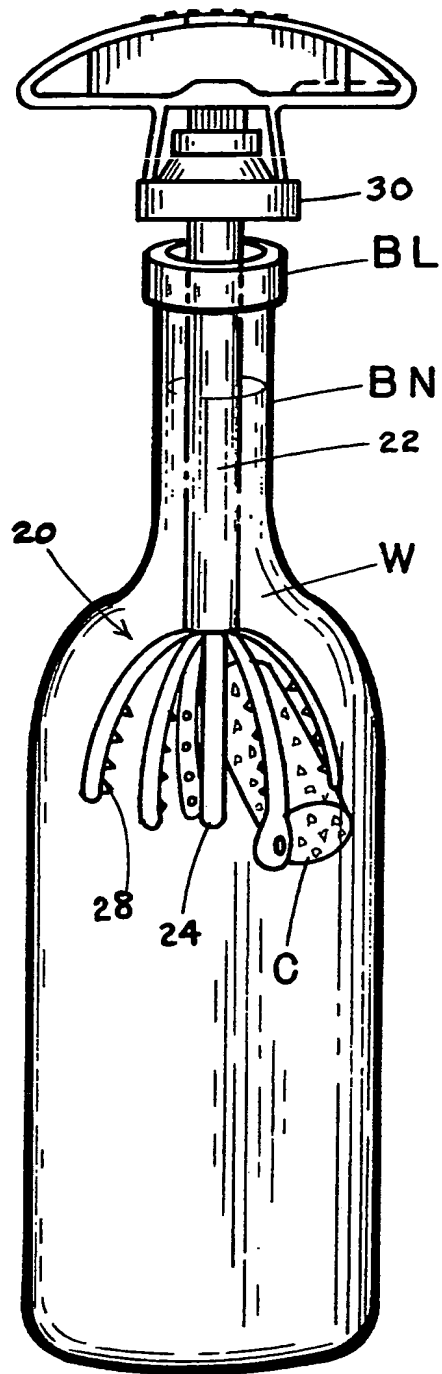


FIG. 2

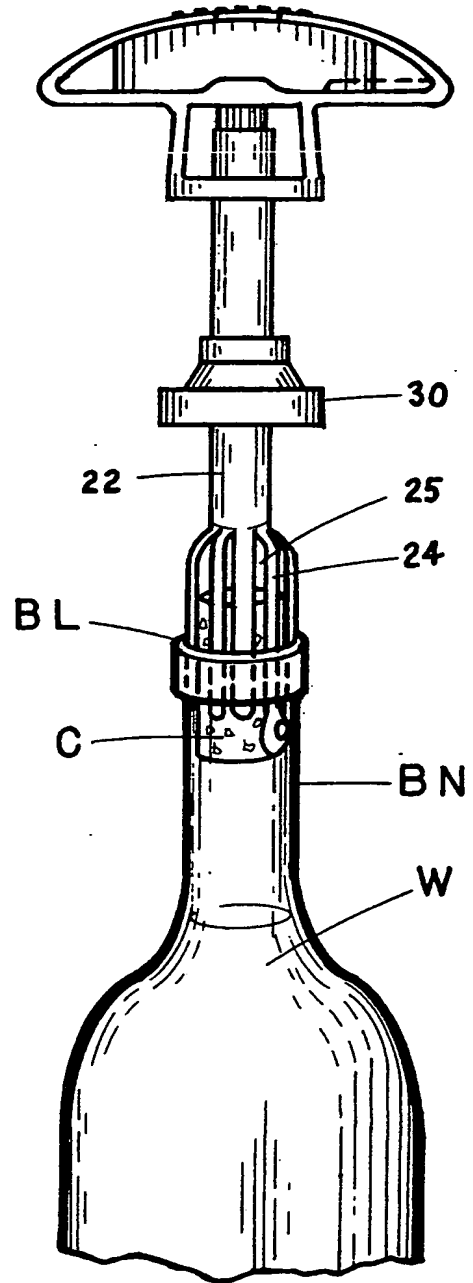



FIG. 3

INTERNATIONAL SEARCH REPORT

International Application No PCT/US 86/02382

I. CLASSIFICATION OF SUBJECT MATTER (If several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC		
IPC ⁴ : B 67 B 7/44		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
IPC ⁴	B 67 B; B 26 B	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹		
Category ¹⁰	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
A	FR, A, 2519957 (SOUHART) 22 July 1983, see page 5, line 38 - page 6, line 5; figure 6	1-3
A	DE, A, 3433273 (HAEDE) 20 March 1986	1,3
A	CH, A, 103858 (PFAEUTI) 17 March 1924	1

<p>¹⁰ Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"A" document member of the same patent family</p>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search		Date of Mailing of this International Search Report
30th June 1987		29 JUL 1987
International Searching Authority EUROPEAN PATENT OFFICE		Signature of Authorized Officer M. VAN MOL 

ANNEX TO THE INTERNATIONAL SEARCH REPORT ON

INTERNATIONAL APPLICATION NO.

PCT/US 86/02382 (SA 15276)

This Annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 15/07/87

The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A- 2519957	22/07/83	None	
DE-A- 3433273	20/03/86	None	
CH-A- 103858		None	

For more details about this annex :
see Official Journal of the European Patent Office, No. 12/82

This Page is inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ BLACK BORDERS
- ☒ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☐ BLURED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☒ COLORED OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REPERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images
problems checked, please do not report the
problems to the IFW Image Problem Mailbox**